

REMARKS

At the time the present Office Action was mailed (December 20, 2006) claims 26-33, 49-52, 55-60, 91 and 92 were pending in the above-captioned application. In this response, claims 26, 49 and 91 have been amended, and claims 29 and 30 have been cancelled. Accordingly, claims 26-28, 31-33, 49-52, 55-60, 91 and 92 are currently pending.

In the December 20, 2006 Office Action, all of the pending claims were rejected. More specifically, the status of the application in light of the December 20, 2006 Office Action is as follows:

- (A) Claims 26-33, 49-52 and 55-60 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,126,798 to Reid et al. ("Reid"); and
- (B) Claims 55-60, 90 and 91 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Reid in view of U.S. Patent No. 4,469,564 to Okinaka ("Okinaka").

A. **Response to the Section 102 Rejections**

Claim 26, as amended, is directed to a reactor for electrochemically processing a microelectronic workpiece. Claim 26 includes, among other features, one or more walls defining a processing space for containing a processing fluid and forming a processing cup having an open top. A microelectronic support is disposed proximate to the cup, and an electrode housing is disposed in the cup. A pressure drop member is disposed over an open end of the electrode housing, and an arrangement of fluid inlets and outlets directs the processing fluid in the reactor. The arrangement includes a first fluid inlet and a first fluid outlet in fluid communication with the interior region of the electrode housing, and a second fluid inlet and a second fluid outlet in fluid communication with the processing space exterior to the interior region. The second fluid outlet directs processing fluid from

the reactor separately from the first fluid outlet. This arrangement allows fluid from the interior and exterior regions to be withdrawn from the reactor without mixing.

Reid is directed to an electroplating apparatus 30 (a portion of which is shown in Figure 2) that includes an anode cup 202 positioned within an overflow reservoir 56A. A membrane 208 is positioned between the interior region of the anode cup 202 and the region outside the anode cup 202. Processing fluid enters the anode cup 202 via inlets 220, 228, and 236, and exits the anode cup 202 through outlets 240, 242. Flow is provided to the region outside the anode cup 202 via a jet 200, and appears to exit this region by overflowing into the overflow reservoir 56A. The fluid exiting the anode cup 202 passes from the outlets 240, 242 into the overflow reservoir 56A. Accordingly, fluid exiting the anode cup 202 mixes with fluid exiting the region outside.

Assuming for the sake of argument that the pressure drop member of claim 26 corresponds at least in part to Reid's membrane 208, and the electrode housing of claim 26 corresponds at least in part to Reid's anode cup 202, Reid fails to establish a *prima facie* basis for rejecting claim 26 under Section 102. For example, claim 26 indicates that the second fluid outlet directs processing fluid from the reactor separately from the first fluid outlet. By contrast, Reid's arrangement mixes the two fluids in his overflow weir 56A. Accordingly, Reid fails to disclose all of the features of claim 26. Furthermore, Reid fails to provide any suggestion to modify his device in a manner that includes the features of claim 26. For at least the foregoing reasons, the Section 102 rejection of claim 26 on the basis of Reid should be withdrawn.

Claims 27, 28 and 31-33 depend from claim 26. Accordingly, the Section 102 rejections of these claims should be withdrawn for at least the foregoing reasons, and for the additional features of these dependent claims. Claims 30 and 31 have been cancelled and accordingly, the Section 102 rejections of these claims are now moot.

Claim 49 has been amended to include features generally similar to those described above with reference to claim 26. Accordingly, the Section 102 rejection of claim 49 should be withdrawn for at least the foregoing reasons and for the additional features of this claim.

Claims 50-52 depend from claim 49. Accordingly, the Section 102 rejections of these claims should be withdrawn for at least the foregoing reasons and for the additional features of these dependent claims.

Claims 55-60 were also rejected under Section 102 on the basis of Reid. The undersigned attorney notes that claims 55-60 depend from claim 91, and claim 91 was rejected under Section 103 on the basis of Reid and Okinaka. Assuming, as stated in the Office Action with regard to claim 91, that Reid does not disclose all of the features of claim 91, Reid must also not disclose all of the features of claims 55-60. Therefore, the Section 102 rejections of claims 55-60 on the basis of Reid should be withdrawn.

B. Response to the Section 103 Rejections

Claims 55-60, 90 and 91 were rejected under 35 U.S.C. § 103(a) on the basis of Reid and Okinaka. Claim 91 has been amended to include features generally similar to those described above with reference to claim 26. Reid was discussed above, and Okinaka was relied upon for disclosing a cation-permeable membrane. However, neither reference, alone or in combination, discloses or suggests the arrangement of fluid inlets and outlets described above with reference to claim 26. In particular, Okinaka's disclosure fails to cure the deficiencies described above with regard to Reid as anticipating or suggesting these features. Accordingly, the Section 103 rejection of claim 91 should be withdrawn for at least the foregoing reasons and for the additional features of this claim. Claims 92 and 55-60 depend from claim 91. Accordingly, the Section 103 rejections of these claims should be withdrawn for the foregoing reasons and for the additional features of these dependent claims.

Application No. 10/059,907
Amendment dated
Reply to Office Action of December 18, 2006

Docket No.: 291958122US1

In view of the foregoing amendments and remarks, applicants believe the pending application is now in condition for allowance. If the Examiner identifies any informalities or other matters that may be expediently handled by telephone, she is encouraged to contact the undersigned attorney at (206) 359-3257.

Dated: April 14, 2007

Respectfully submitted,

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